



## SEQUENCE LISTING

<110> Ono, Toshiro  
Nakayama, Eiichi

<120> CANCER ASSOCIATED ANTIGENS AND USES THEREFOR

<130> L0461.70086US00

<140> US 09/559,013

<141> 2000-04-26

<150> US 60/168,353

<151> 1999-12-01

<160> 33

<170> PatentIn Version 3.2

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Ser Thr His Gly Lys Phe Asn Gly Thr Val Lys Ala Glu Asn Gly Lys  
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 Gly Thr Ile Asn Asp Ile Ser Val Leu Arg Val Thr Arg Arg Gly Ala  
 65 70 75 80  
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 85 90 95  
 Gln Val Arg Val Asp Trp Glu Arg Arg Phe Asp His Met Gln Gln His  
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 Ser Gly Gln His Leu Ile Thr Ala Val Ala Asp Leu Leu Phe Gly Leu  
 115 120 125  
 Lys Thr Thr Ser Trp Glu Leu Gly Arg Leu Arg Ser Val Ile Glu Leu  
 130 135 140  
 Asp Ser Pro Ser Val Thr Ala Glu Gln Val Ala Ala Ile Glu Gln Glu  
 145 150 155 160  
 Cys Gln Ser Glu Asn Gln Arg Pro Ala Ala Trp  
 165 170

<210> 11  
 <211> 1464  
 <212> DNA  
 <213> Mus musculus

<400> 11  
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 atctggtgga ggcagcagag tgaaggcctg cagcagacga gccagcacca caaagagctc 180  
 cagccgtgcc agaggctctc ccaggcacac gcgtgcccc cagccaaagg atggtgttct 240  
 gggattcttc ccaggttcca ggaagcgatc tggccagaac ttgctgggca gttcccaaac 300  
 catctcatcc aggttgccgc cttggatggt ggggatgatg accatatcct tagggatgtc 360

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atagccggag atgctgctag ccctagttgc acgatggggc aaggccaagg gcaccacagg 420
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gtacaggagc tgggagcctg ggcccagctt gaggtctaac tcttcctgca gtgcgttctg 540
gatctcaggg tgggtgaagca ggaaagccac agcccaggag agcgtggtag ccgtgggtctc 600
ggtgccgccc atgaacaggt ccaccaccga catgtgcacg tgcccctcgt ggagccgctc 660
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catgccagc atcagggtg agcgagagag tttcttggg gccttcaca tgagagagta 1140
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gtccaccac ttttgatca aggcctcctc aatggttctg ttagaattta gcaccaccac 1260
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gtagatggga aggttaggct gtaggaagtg cagaaaaccg ggggccagag gcgggaggtg 1380
cagcttccg agcttccatt ggccccacag ccagcgggtg ccagctagca gcagcaacag 1440
cagcagcagc ccaggtagca gcat 1464

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<210> 12
<211> 487
<212> PRT
<213> Mus musculus

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<400> 12
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Leu Ala Pro Gly Phe Leu His Phe Leu Gln Pro Asn Leu Pro Ile Tyr
35 40 45
Leu Leu Gly Leu Thr Gln Lys Leu Gly Pro Ile Tyr Arg Ile Arg Leu
50 55 60
Gly Met Gln Asp Val Val Val Leu Asn Ser Asn Arg Thr Ile Glu Glu
65 70 75 80
Ala Leu Ile Gln Lys Trp Val Asp Phe Ala Gly Arg Pro His Met Leu
85 90 95
Asn Gly Lys Met Asp Leu Asp Leu Ser Leu Gly Asp Tyr Ser Leu Met
100 105 110
Trp Lys Ala His Lys Lys Leu Ser Arg Ser Ala Leu Met Leu Gly Met
115 120 125
Arg Asp Ser Met Glu Pro Leu Ile Glu Gln Leu Thr Gln Glu Phe Cys
130 135 140
Glu Arg Met Arg Ala Gln Ala Gly Thr Pro Val Ala Ile His Lys Glu
145 150 155 160
Phe Ser Phe Leu Thr Cys Ser Ile Ile Ser Cys Leu Thr Phe Gly Asp
165 170 175
Lys Asp Ser Thr Leu Val Gln Thr Leu His Asp Cys Val Gln Asp Leu
180 185 190
Leu Gln Ala Trp Asn His Trp Ser Ile Gln Ile Leu Thr Ile Ile Pro
195 200 205
Leu Leu Arg Phe Leu Pro Asn Pro Gly Leu Gln Lys Leu Lys Gln Ile
210 215 220
Gln Glu Ser Arg Asp His Ile Val Lys Gln Gln Leu Lys Arg His Lys
225 230 235 240
Asp Ser Leu Val Ala Gly Gln Trp Lys Asp Met Ile Asp Tyr Met Leu
245 250 255
Gln Gly Val Glu Lys Gln Arg Asp Gly Lys Asp Glu Glu Arg Leu His
260 265 270
Glu Gly His Val His Met Ser Val Val Asp Leu Phe Ile Gly Gly Thr

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	275		280		285
Glu	Thr	Ala	Thr	Thr	Leu
290					295
His	Pro	Glu	Ile	Gln	Lys
305					310
Gly	Pro	Gly	Ser	Gln	Leu
					315
Leu	Met	Ala	Thr	Ile	Ala
					325
Leu	Ala	Leu	Pro	His	Arg
					330
Asp	Ile	Pro	Lys	Asp	Met
370					375
Leu	Asp	Glu	Met	Val	Trp
385					390
Phe	Leu	Glu	Pro	Gly	Lys
					405
Ala	Arg	Val	Cys	Leu	Gly
					420
Val	Leu	Ala	Arg	Leu	Leu
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Gly	Thr	Leu	Pro	Ser	Leu
450					455
Pro	Ile	Pro	Pro	Phe	Gln
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Gln	Asp	Gln	Gly	Glu	Arg
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<210> 13  
 <211> 985  
 <212> DNA  
 <213> Mus musculus

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 ggaggctggg tccagcaaga gcaccgtgga cgggaagctg gtaaaagctt cttttgctcc 180  
 aataagcttt gccatcaaag ccatgaaaga aggacggtac acggtgctag ctgagagcaa 240  
 gaacgaggag aagaaaaagt ctgggccaac ctctgacaac gaagaggaag atgatgagga 300  
 agatgggagt tacctgcacc cgtctctctt tgcttccaag aagagcagcc gcctggaaga 360  
 gctgatgaag cccttgaagg tgggtggacc ggatcacct ctagcagccc tttgtccgga 420  
 aagcacaaag ctgacagctc actcccagcc ccaccccaac ttgcaagaat ggggcccaag 480  
 aacgatcaaa gatttgattt ctttcagccc tggcacccag tacaacgcct actcagagt 540  
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 ggagctgtcc tgtgattcat tgccccctc cattactgct ctgagcctat tcatgtcagc 840  
 accatctgtc taaaatcact acccaggaat gctttttaac gtcatgatca catctaaatg 900  
 aggtcactct gccagcctga ggcttctagg tctgcagagg aaggaagcct tttctctgca 960  
 gaaaataaaa aggaccatgt gcaat 985

<210> 14  
 <211> 180  
 <212> PRT  
 <213> Mus musculus

<400> 14  
 Ala Arg Ala Thr Ala Glu Glu Ala Pro Thr Glu Thr Ala Val Glu Glu  
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 Ser Gly Glu Ala Gly Glu Asp Gly Ala Pro Glu Gly Met Ala Glu Thr



Lys Lys Asp Val Tyr Glu  
85

<210> 17  
<211> 1036  
<212> DNA  
<213> Mus musculus

<400> 17  
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aagtttaagg atgatccccg gaagggggca aggtcttccc gctttactag tgttaaccat 120  
gatgcgaagg aagagtgtgg caaggtagaa tcacccctg cagcgagggtg ctgggctcgc 180  
agagctgagc tctcgaagca gaatggctcc tcggcctctc agatttcttc tgctgaaggc 240  
agggcagctg caaaaggtaa caacagcttg gagagggaga ggcagaattt accaggagcc 300  
cttgttctaa acttacaatg aaaccagtca gtcaattaga ctaaagttgt tgattccttg 360  
tgattatttc catgtgaaaa tggttgtgta caatgacatt taaaaaaaat catcctctcg 420  
tttagaaggt agaaaggggg gaaaggaaac tttctaaatg ctgcttgaga ttgcagtaag 480  
aacatacatt ttctaacctg aaagttgaaa caaatccacac ttgttctgta gactgtgtct 540  
ctcttacctg ttgctgtcag ggttacctta tctgctaaac tatgtcggga aagaaaaaat 600  
tacttttggt tgcattgcat gggtaaatgg tcctgttaat ttggcagtgg gtgtaaaagc 660  
ttattaaagt tcttcttttg ctttgaccca gaacaatggc atcatttggg tttttgtctg 720  
aaatcgtgat accaggtaac tccaaattga tcccttgcat ttgcaacaaa agtattgtgt 780  
ttcagtggtc tcacctgtag aaaactagtt ttcactagaa atgctcatca gaacacaaa 840  
aaaaaaacca tctttaatag gaataagggt tataattgct tgttgtacag aaatgggtga 900  
ctaaagagag agaaacaaag cgtgggaaat ttaaaaaaaa aaccacaga gaaacaatgg 960  
taaaaaatga atccaaagag tacgggtgag caagtacaaa tcacctttga gaaaacagaa 1020  
actgtcagaa tgggtg 1036

<210> 18  
<211> 106  
<212> PRT  
<213> Mus musculus

<400> 18  
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Gly Lys Ala Gly Lys Phe Lys Asp Asp Pro Glu Lys Gly Ala Arg Ser  
20 25 30  
Ser Arg Phe Thr Ser Val Asn His Asp Ala Lys Glu Glu Cys Gly Lys  
35 40 45  
Val Glu Ser Pro Pro Ala Ala Arg Cys Ser Ala Arg Arg Ala Glu Leu  
50 55 60  
Ser Lys Gln Asn Gly Ser Ser Ala Ser Gln Ile Ser Ser Ala Glu Gly  
65 70 75 80  
Arg Ala Ala Ala Lys Gly Asn Asn Ser Leu Glu Arg Glu Arg Gln Asn  
85 90 95  
Leu Pro Gly Ala Leu Val Leu Asn Leu Gln  
100 105

<210> 19  
<211> 530  
<212> DNA  
<213> Mus musculus

<400> 19  
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ccttagagac ctggctgtgc acactgcca cagcctcagg agcagcccag cctgggggtg 180  
tgtggtcaca ctacacagga aagagggtga ttctgaattc atgaatatca ttgctaataga 240  
gattggatcg gaggagaccc tcctgttctt aactgtgggg gatgagaagg gtgctgggct 300  
cttcttactg gcaggcccgg cagaggctgt ggaaacctg gggcccaggg tggctgaagt 360

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cttgggaaggc aaaggagcag ggaagaaggg ccgcttccag ggcaaagcca ccaagatgag 420
ccgccggggca gaggcgcagg cgcttctgca ggactatgtc agcacacaga gtgctgagga 480
gtgagggggcc aggactcgtc ctgtgaccaa cagttaaaat attgtgactc 530

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<210> 20
<211> 160
<212> PRT
<213> Mus musculus

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<400> 20
Ala Arg Gly Ser Glu Lys Ala Leu Thr Ser Leu Leu Lys Cys Gly Val
 1          5          10          15
Glu Asp His Val Glu Ala Val Lys Lys Leu Gln Asn Ala Thr Lys Leu
          20          25          30
Leu Gln Lys Asn Asn Leu Asn Leu Leu Arg Asp Leu Ala Val His Thr
          35          40          45
Ala His Ser Leu Arg Ser Ser Pro Ala Trp Gly Gly Val Val Thr Leu
          50          55          60
His Arg Lys Glu Gly Asp Ser Glu Phe Met Asn Ile Ile Ala Asn Glu
65          70          75          80
Ile Gly Ser Glu Glu Thr Leu Leu Phe Leu Thr Val Gly Asp Glu Lys
          85          90          95
Gly Ala Gly Leu Phe Leu Leu Ala Gly Pro Ala Glu Ala Val Glu Thr
          100          105          110
Leu Gly Pro Arg Val Ala Glu Val Leu Glu Gly Lys Gly Ala Gly Lys
          115          120          125
Lys Gly Arg Phe Gln Gly Lys Ala Thr Lys Met Ser Arg Arg Ala Glu
          130          135          140
Ala Gln Ala Leu Leu Gln Asp Tyr Val Ser Thr Gln Ser Ala Glu Glu
145          150          155          160

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<210> 21
<211> 20
<212> DNA
<213> Mus musculus

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<400> 21
gtggacaaga ggaagcacaa 20

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<210> 22
<211> 20
<212> DNA
<213> Mus musculus

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<400> 22
tgaaaagtaa gggctgtcat 20

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<210> 23
<211> 1895
<212> DNA
<213> Homo sapiens

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<220>
<221> CDS
<222> (49)...(1677)

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<400> 23
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cca gcc gct ggc ttc ctt ccc tca ctc ctg aag gtg ctg ctc ctg cct Pro Ala Ala Gly Phe Leu Pro Ser Leu Leu Lys Val Leu Leu Leu Pro 5 10 15	105
ctg gca cct gcc gca gcc cag gat tcg act cag gcc ccc act cca ggc Leu Ala Pro Ala Ala Ala Gln Asp Ser Thr Gln Ala Pro Thr Pro Gly 20 25 30 35	153
agc cct ctc tct cct acc gaa tac gaa cgc ttc ttc gca ctg ctg act Ser Pro Leu Ser Pro Thr Glu Tyr Glu Arg Phe Phe Ala Leu Leu Thr 40 45 50	201
cca acc tgg aag gca gag act acc tgc cgt ctc cgt gca acc cac ggc Pro Thr Trp Lys Ala Glu Thr Thr Cys Arg Leu Arg Ala Thr His Gly 55 60 65	249
tgc cgg aat ccc aca ctc gtc cag ctg gac caa tat gaa aac cac ggc Cys Arg Asn Pro Thr Leu Val Gln Leu Asp Gln Tyr Glu Asn His Gly 70 75 80	297
tta gtg ccc gat ggt gct gtc tgc tcc aac ctc cct tat gcc tcc tgg Leu Val Pro Asp Gly Ala Val Cys Ser Asn Leu Pro Tyr Ala Ser Trp 85 90 95	345
ttt gag tct ttc tgc cag ttc act cac tac cgt tgc tcc aac cac gtc Phe Glu Ser Phe Cys Gln Phe Thr His Tyr Arg Cys Ser Asn His Val 100 105 110 115	393
tac tat gcc aag aga gtc ctg tgt tcc cag cca gtc tct att ctc tca Tyr Tyr Ala Lys Arg Val Leu Cys Ser Gln Pro Val Ser Ile Leu Ser 120 125 130	441
cct aac act ctc aag gag ata gaa gct tca gct gaa gtc tca ccc acc Pro Asn Thr Leu Lys Glu Ile Glu Ala Ser Ala Glu Val Ser Pro Thr 135 140 145	489
acg atg acc tcc ccc atc tca ccc cac ttc aca gtg aca gaa cgc cag Thr Met Thr Ser Pro Ile Ser Pro His Phe Thr Val Thr Glu Arg Gln 150 155 160	537
acc ttc cag ccc tgg cct gag agg ctc agc aac aac gtg gaa gag ctc Thr Phe Gln Pro Trp Pro Glu Arg Leu Ser Asn Asn Val Glu Glu Leu 165 170 175	585
cta caa tcc tcc ttg tcc ctg gga ggc cag gag caa gcg cca gag cac Leu Gln Ser Ser Leu Ser Leu Gly Gly Gln Glu Gln Ala Pro Glu His 180 185 190 195	633
aag cag gag caa gga gtg gag cac agg cag gag ccg aca caa gaa cac Lys Gln Glu Gln Gly Val Glu His Arg Gln Glu Pro Thr Gln Glu His 200 205 210	681
aag cag gaa gag ggg cag aaa cag gaa gag caa gaa gag gaa cag gaa Lys Gln Glu Glu Gly Gln Lys Gln Glu Glu Gln Glu Glu Glu Gln Glu 215 220 225	729
gag gag gga aag cag gaa gaa gga cag ggg act aag gag gga cgg gag Glu Glu Gly Lys Gln Glu Glu Gly Gln Gly Thr Lys Glu Gly Arg Glu 230 235 240	777

gct gtg tct cag ctg cag aca gac tca gag ccc aag ttt cac tct gaa Ala Val Ser Gln Leu Gln Thr Asp Ser Glu Pro Lys Phe His Ser Glu 245 250 255	825
tct cta tct tct aac cct tcc tct ttt gct ccc cgg gta cga gaa gta Ser Leu Ser Ser Asn Pro Ser Ser Phe Ala Pro Arg Val Arg Glu Val 260 265 270 275	873
gag tct act cct atg ata atg gag aac atc cag gag ctc att cga tca Glu Ser Thr Pro Met Ile Met Glu Asn Ile Gln Glu Leu Ile Arg Ser 280 285 290	921
gcc cag gaa ata gat gaa atg aat gaa ata tat gat gag aac tcc tac Ala Gln Glu Ile Asp Glu Met Asn Glu Ile Tyr Asp Glu Asn Ser Tyr 295 300 305	969
tgg aga aac caa aac cct ggc agc ttc ctg cag ctg ccc cac aca gag Trp Arg Asn Gln Asn Pro Gly Ser Phe Leu Gln Leu Pro His Thr Glu 310 315 320	1017
gcc ttg ctg gtg ctg tgc tat tgc atc gtg gag aat acc tgc atc ata Ala Leu Leu Val Leu Cys Tyr Ser Ile Val Glu Asn Thr Cys Ile Ile 325 330 335	1065
acc ccc aca gcc aag gcc tgg aag tac atg gag gag gag atc ctt ggt Thr Pro Thr Ala Lys Ala Trp Lys Tyr Met Glu Glu Glu Ile Leu Gly 340 345 350 355	1113
ttc ggg aag tcg gtc tgt gac agc ctt ggg cgg cga cac atg tct acc Phe Gly Lys Ser Val Cys Asp Ser Leu Gly Arg Arg His Met Ser Thr 360 365 370	1161
tgt gcc ctc tgt gac ttc tgc tcc ttg aag ctg gag cag tgc cac tca Cys Ala Leu Cys Asp Phe Cys Ser Leu Lys Leu Glu Gln Cys His Ser 375 380 385	1209
gag gcc agc ctg cag cgg caa caa tgc gac acc tcc cac aag act ccc Glu Ala Ser Leu Gln Arg Gln Gln Cys Asp Thr Ser His Lys Thr Pro 390 395 400	1257
ttt gtc agc ccc ttg ctt gcc tcc cag agc ctg tcc atc ggc aac cag Phe Val Ser Pro Leu Leu Ala Ser Gln Ser Leu Ser Ile Gly Asn Gln 405 410 415	1305
gta ggg tcc cca gaa tca ggc cgc ttt tac ggg ctg gat ttg tac ggt Val Gly Ser Pro Glu Ser Gly Arg Phe Tyr Gly Leu Asp Leu Tyr Gly 420 425 430 435	1353
ggg ctc cac atg gac ttc tgg tgt gcc cgg ctt gcc acg aaa ggc tgt Gly Leu His Met Asp Phe Trp Cys Ala Arg Leu Ala Thr Lys Gly Cys 440 445 450	1401
gaa gat gtc cga gtc tct ggg tgg ctc cag act gag ttc ctt agc ttc Glu Asp Val Arg Val Ser Gly Trp Leu Gln Thr Glu Phe Leu Ser Phe 455 460 465	1449
cag gat ggg gat ttc cct acc aag att tgt gac aca gac tat atc cag Gln Asp Gly Asp Phe Pro Thr Lys Ile Cys Asp Thr Asp Tyr Ile Gln 470 475 480	1497
tac cca aac tac tgt tcc ttc aaa agc cag cag tgt ctg atg aga aac	1545



Tyr	Pro	Asn	Tyr	Cys	Ser	Phe	Lys	Ser	Gln	Gln	Cys	Leu	Met	Arg	Asn		
485						490					495						
cgc	aat	cgg	aag	gtg	tcc	cgc	atg	aga	tgt	ctg	cag	aat	gag	act	tac	1593	
Arg	Asn	Arg	Lys	Val	Ser	Arg	Met	Arg	Cys	Leu	Gln	Asn	Glu	Thr	Tyr		
500					505					510					515		
agt	gcg	ctg	agc	cct	ggc	aaa	agt	gag	gac	gtt	gtg	ctt	cga	tgg	agc	1641	
Ser	Ala	Leu	Ser	Pro	Gly	Lys	Ser	Glu	Asp	Val	Val	Leu	Arg	Trp	Ser		
				520					525					530			
cag	gag	ttc	agc	acc	ttg	act	cta	ggc	cag	ttc	gga	tgagctggcg				1687	
Gln	Glu	Phe	Ser	Thr	Leu	Thr	Leu	Gly	Gln	Phe	Gly						
			535					540									
tctattctgc	ccacacccca	gccaacctg	cccacgttct	ctattgtttt	gagaccccat	1747											
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ggagcaacag	tcccagagag	ggccacggtg	ggagctgcgc	cctccttaaa	agatgacttt	1867											
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<210> 24  
 <211> 543  
 <212> PRT  
 <213> Homo sapiens

<400> 24

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			20					25					30				
Thr	Pro	Gly	Ser	Pro	Leu	Ser	Pro	Thr	Glu	Tyr	Glu	Arg	Phe	Phe	Ala		
		35					40					45					
Leu	Leu	Thr	Pro	Thr	Trp	Lys	Ala	Glu	Thr	Thr	Cys	Arg	Leu	Arg	Ala		
		50				55					60						
Thr	His	Gly	Cys	Arg	Asn	Pro	Thr	Leu	Val	Gln	Leu	Asp	Gln	Tyr	Glu		
65					70					75				80			
Asn	His	Gly	Leu	Val	Pro	Asp	Gly	Ala	Val	Cys	Ser	Asn	Leu	Pro	Tyr		
			85						90					95			
Ala	Ser	Trp	Phe	Glu	Ser	Phe	Cys	Gln	Phe	Thr	His	Tyr	Arg	Cys	Ser		
			100					105					110				
Asn	His	Val	Tyr	Tyr	Ala	Lys	Arg	Val	Leu	Cys	Ser	Gln	Pro	Val	Ser		
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Ile	Leu	Ser	Pro	Asn	Thr	Leu	Lys	Glu	Ile	Glu	Ala	Ser	Ala	Glu	Val		
	130					135					140						
Ser	Pro	Thr	Thr	Met	Thr	Ser	Pro	Ile	Ser	Pro	His	Phe	Thr	Val	Thr		
145					150					155				160			
Glu	Arg	Gln	Thr	Phe	Gln	Pro	Trp	Pro	Glu	Arg	Leu	Ser	Asn	Asn	Val		
				165					170					175			
Glu	Glu	Leu	Leu	Gln	Ser	Ser	Leu	Ser	Leu	Gly	Gly	Gln	Glu	Gln	Ala		
			180					185					190				
Pro	Glu	His	Lys	Gln	Glu	Gln	Gly	Val	Glu	His	Arg	Gln	Glu	Pro	Thr		
		195					200					205					
Gln	Glu	His	Lys	Gln	Glu	Glu	Gly	Gln	Lys	Gln	Glu	Glu	Gln	Glu	Glu		
	210					215					220						
Glu	Gln	Glu	Glu	Glu	Gly	Lys	Gln	Glu	Glu	Gly	Gln	Gly	Thr	Lys	Glu		
225					230					235				240			
Gly	Arg	Glu	Ala	Val	Ser	Gln	Leu	Gln	Thr	Asp	Ser	Glu	Pro	Lys	Phe		
			245						250					255			
His	Ser	Glu	Ser	Leu	Ser	Ser	Asn	Pro	Ser	Ser	Phe	Ala	Pro	Arg	Val		
			260					265					270				
Arg	Glu	Val	Glu	Ser	Thr	Pro	Met	Ile	Met	Glu	Asn	Ile	Gln	Glu	Leu		

275	Ile Arg Ser Ala Gln Glu	280	Ile Asp Glu Met Asn Glu	285	Ile Tyr Asp Glu
290	Asn Ser Tyr Trp Arg Asn Gln Asn Pro Gly Ser Phe Leu Gln Leu Pro	295	310	300	320
305	His Thr Glu Ala Leu Leu Val Leu Cys Tyr Ser Ile Val Glu Asn Thr	315	330	335	335
	Cys Ile Ile Thr Pro Thr Ala Lys Ala Trp Lys Tyr Met Glu Glu Glu		340	345	350
	Ile Leu Gly Phe Gly Lys Ser Val Cys Asp Ser Leu Gly Arg Arg His		355	360	365
	Met Ser Thr Cys Ala Leu Cys Asp Phe Cys Ser Leu Lys Leu Glu Gln		370	375	380
	Cys His Ser Glu Ala Ser Leu Gln Arg Gln Gln Cys Asp Thr Ser His		385	390	400
	Lys Thr Pro Phe Val Ser Pro Leu Leu Ala Ser Gln Ser Leu Ser Ile		405	410	415
	Gly Asn Gln Val Gly Ser Pro Glu Ser Gly Arg Phe Tyr Gly Leu Asp		420	425	430
	Leu Tyr Gly Gly Leu His Met Asp Phe Trp Cys Ala Arg Leu Ala Thr		435	440	445
	Lys Gly Cys Glu Asp Val Arg Val Ser Gly Trp Leu Gln Thr Glu Phe		450	455	460
	Leu Ser Phe Gln Asp Gly Asp Phe Pro Thr Lys Ile Cys Asp Thr Asp		465	470	475
	Tyr Ile Gln Tyr Pro Asn Tyr Cys Ser Phe Lys Ser Gln Gln Cys Leu		485	490	495
	Met Arg Asn Arg Asn Arg Lys Val Ser Arg Met Arg Cys Leu Gln Asn		500	505	510
	Glu Thr Tyr Ser Ala Leu Ser Pro Gly Lys Ser Glu Asp Val Val Leu		515	520	525
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